RECREATION

A Guide to Cost Analysis for Recreation Managers

Know Your Costs

Ontario Recreation Society

Ontario

Ministry of Tourism and Recreation

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FOREWORD

As a recreation manager, increasing efficiency and effectiveness are two of your top priorities. Strengthening these skills will mean better recreation services for Ontario.

I am encouraged by the successful efforts of the Ontario Recreation Society, in cooperation with my ministry, in developing this cost analysis manual. In managing public recreation services, cost analysis is an increasingly useful tool.

We are all working to deal with the challenges of public sector constraints, aging physical plants and changing community needs. At the same time we want to ensure that the important social and economic contribution that recreation makes is not lost.

My government, through our significant financial assistance programs for capital conservation, new construction and improved facility management, is very much in support of your efforts.

I will continue to work with you to provide Ontarians with high quality recreation services.

Yours sincerely,

John Eakins
Minister
M.P.P., Victoria-Haliburton

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Table of Contents

INTRODUCTION 7

The Town of Seabreeze Parks and Recreation Department 8
(Fictional Case Study)
- Allocating Costs
- Determining Cost Centres
- Direct and Indirect Costs

- **The Complete Process of Cost Analysis** 19
  - Selection of Unit Measures

TECHNICAL MATERIAL

Introduction 24

Uses of Cost Analysis 24

When Not to Use Cost Analysis 27

Definition of Costing Terms 27

Allocation Concepts and Examples 31

Special Considerations 33

FURTHER READING 36

Introduction

Recreation practitioners have been searching for useful management tools and techniques to aid them in carrying out their responsibilities. As a result of a needs survey, the subject of cost analysis surfaced as one of the topics most requested by the managers.

The Ontario Recreation Society in conjunction with the Ministry of Tourism and Recreation initiated a project to produce a manual on the process of cost analysis. The objective was to provide material to managers that was relevant, timely and most of all, easy to learn and employ.

A provincial committee was established consisting of:

Dave Clark
Michelle Haney-Kileeg
Tom Horlor
Bonnie Lindsay
Roy Male
Jim Olmstead
Allan Ross
John Shipman
Allan Will

We are indebted to these people for their volunteer effort, knowledge and advice. We would like to acknowledge the work of Woods Gordon and Co. for their assistance in developing the core document. The committee would also like to recognize the contribution of Tom Goodale for providing his research and published material to the project.

Jim Olmstead
Co-Chairman

Roy Male
Co-Chairman

The Town of Seabreeze, Parks and Recreation Department

ALLOCATING COSTS

DETERMINING COST CENTRES

DIRECT AND INDIRECT COSTS

It was only 9:30 in the morning, but Don Rowe, the recreation director for the town of Seabreeze, knew it was going to be a bad day. With a capital Bad.

First there was the message from Harry Hardcase, the maintenance supervisor: the filtration system in the Oceanside pool had broken down again —the third time this summer—and this time it definitely had to be replaced.

"We've kept it going for years more by good luck than good management," Harry said, "but nobody's luck lasts forever, and ours has run out. We need a whole new system on that pool."

Terrific. There was scarcely enough money left in the pool budget to keep lifeguards on duty, and less than enough for chemicals and maintenance. A new filtration system would cost at least $40,000, and that meant going back to the council for money. The chances of getting it were slim; at the very least there would be a serious fight before it was approved.

While he was chewing that bone, the phone rang again, and a peevish voice sounded in his ear.

"Don? That you Don?"

He sighed. The voice belonged to Councilor Scrag, the new broom on the town council, and a persistent questioner of departmental budgets. A little knowledge is a dangerous thing, Don reflected, and Leonard Scrag was one of those people who learns just a little about everything. But he kept that thought to himself. What he said was:

"Good morning, Councillor. How can I help you today."

"You can tell me what's going on with the cost of running the swimming program in this town," Scrag said grimly.

"I've been going over the operating costs for the three swimming pools, and it looks to me like the Village Green pool is costing a lot more to operate than the other two. Look at the figures yourself. Oceanside cost $167,486 to operate last year, Pinewood cost $196,500, and Village Green cost $249,345.

"Well," Don said in his most reasonable voice, "you have to remember that those pools were all built at different times. Some of the maintenance costs are a little higher on the older equipment." He quickly described the problems with the filtration system at Oceanside.

"Don, that's the stuff that makes roses grow," Scrag replied, exasperation clear in his voice.

"You know as well as I do that Village Green is the newest pool. It isn't just maintenance costs that are screwed up. Something is wrong with the way those pools are being managed.

"Village Green is costing us 50 per cent more than Oceanside, and 25 per cent more than Pinewood. All three of them get about the same amount of use, so the cost per swimmer must be around 50% higher at Village Green.

"If your budget is as tight as you say it is, I think we ought to close down Village Green and send the swimmers to the other two pools. Even if we have to use buses we can still save about $75,000 a year, the way I figure it. I'm going to make a motion to that effect at the next council meeting."

Scrag hung up, and Don shook his head in despair. I ought to let you do it, he thought. But I know those pools, and I know it costs about the same to run each of them. I can't explain where the extra costs are, but I just know it doesn't cost 50% more to run the Village Green pool. It can't. No matter what it says in the budget. He sighed again.

By a happy accident Frank Forthright, the recreation director for the neighbouring city of Leafy Glen dropped in that morning to ask if his boy's soccer team could practise on the Seabreeze field while the regional championships were being played at their home field. And Don, in response to the usual "Howzitgoing" started to describe his problems.

When he finished, Frank commented wryly: "Looks like you need a little practical cost analysis in your operation. Your problem is that you don't know what it really costs to run your pools."

Don bristled. "Of course I do. If I didn't know what it costs to run each of those pools, Brother Scrag wouldn't be getting up my nose the way he is. The problem isn't that I don't have enough information about the costs of each pool; my problem is that I have too much!"

"Your problem is that the information you have isn't organized in a way that makes it useful," said Frank. "You know what your direct costs are, but you don't know how all the rest of the costs are allocated."

Don looked a little uneasy. "What do you mean," he asked.

"For example, isn't your office at the Village Green pool building?"

Don nodded. "Sure. All the offices and personnel for the aquatic unit are there. It's the biggest complex we have. We store the portable pool equipment and all the supplies there as well."

Frank smiled. "And do you charge a part of those costs against the other pools?"

"What for?" Don asked. "The money all comes from the same place anyway. What difference does it make if I charge it against one pool instead of the other?"

"The difference is that you get Councillor Scrag off your case," Frank replied. "Besides, maybe it is costing too much to run the Village Green pool; if the costs aren't allocated properly, you don't have any way to find out."

"I see the point," Don said. "I guess the extra cost of storage and offices would make a difference."

"You bet it does. Add them all up and see how the operating costs for the pool compare then. And

give me a call when it's done; I'd be interested in seeing the results."

Don started that morning to recalculate the operating costs of the three pools. He figured that the total cost of the shared facilities at the new Village Green pool—offices, storage space, administrative costs—was about $66,000 per year. When that was shared between the three pools it reduced the operating costs at Village Green by $44,000, and added $22,000 to each of the other two.

Village Green, because it was the newest facility, still had debenture costs to meet of $20,000 per year. Repairs this year cost about $10,000—new diving boards, and the pool had to be repainted—but those were one-time expenses that wouldn't recur next year. And next year, Don remembered, it would be the Pinewood pool that needed repairs. When all of his calculations were complete, it was clear that the operating cost of all three pools was roughly the same.

Pleased with the results of his efforts, Don had the calculations typed up neatly in a memo and sent it to Councillor Scrag. The next day Scrag called him.

"Don, I can see that the difference between the operating costs of the three pools isn't as great as I thought it was," Scrag said, "but I don't think your new figures are accurate. You don't seem to make any provision for general administration costs."

"What do you mean?" Don asked. "I've shown the cost of maintaining the offices in the Village Green complex, and the charges for administration—salaries and supplies, things like that."

"Yes, I see that," Scrag said, "but you haven't included the general costs of running the recreation department. Part of that cost should be charged against the aquatic program if your figures are going to be accurate."

"I don't quite see what you're driving at," Don said.

"It's pretty simple, really. For instance, who pays your salary?"

"The town does, of course," Don said. "I still don't see your point."

"As the Recreation Director, you spend about 40% of your time involved with the aquatic unit. Forty per cent of your salary—and your secretary's salary and the cost of office supplies—should be charged against the aquatic unit. That's the only way we'll know what the real costs are."

"Councillor, I don't like to contradict you," Don said, "but it sounds like a lot of unnecessary work to me. It doesn't matter how you carve up the costs, it all comes from the same place—different pocket, maybe, but the same pants. I don't see what value there is in doing a lot of imaginary calculations. They won't change anything."

"That's where you're wrong," the politician said. "Once you know what the real cost of your operations is, you can start to control it. You can figure out the real cost compared with your projections, or compared with the number of people who use the facilities, or compared with similar programs in other jurisdictions. You can even start to develop figures to make accurate comparisons between different kinds of programs—the cost of running the swim club compared with a hockey program, for example.

"And when you can do that," Scrag said, pointing a finger for emphasis, "you're starting to get cost information that's useful—information that helps you make good decisions."

"He's right," Frank said when Don called to complain about this new and unreasonable burden. "That kind of cost analysis is very useful. And it isn't hard to do. You already have most of the information you need. It's just a question of organizing it properly."

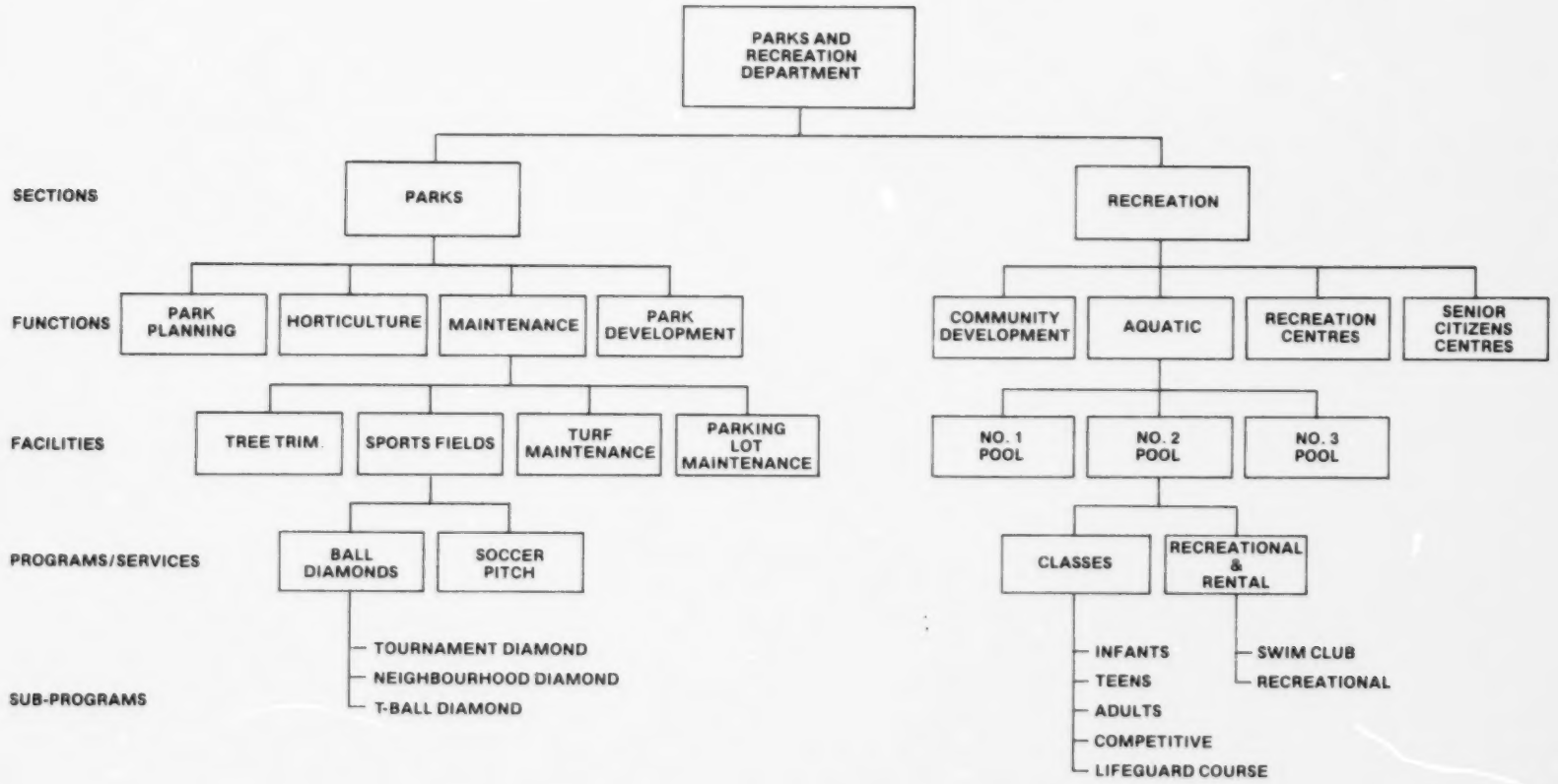
"Maybe so," Don replied, "but I don't understand exactly what to do."

"The first step is allocating costs properly," Frank said. "You have to charge all the costs of running the recreation department against the different programs you run, so that every program pays a fair share—and so you know the real cost of each program. The place to start is with your organization chart. Can you draw it for me?"

"Of course I can," Don replied. "I know it better than I know my own name. It looks like this."

And he drew this chart.

HIERARCHY OF "COST CENTRES"



"Each of those levels in your organization will have **direct costs,**" Frank explained, "and each of them will have **indirect costs,** which are costs that are allocated from other parts of the organization. Those allocated costs flow from the top of the organization chart to the bottom—that is the general administration costs are distributed down to the lower levels, while the specific administration costs are charged against each specific operation. Part of your aquatic manager's salary is charged to each of the pools; but the lifeguards' salaries are charged directly to the operating costs of the pool where they work.

"Let's build up the cost allocations for the recreation department and you'll see what I mean."

"Start at the top of the organization chart, and you see that the Department of Parks and Recreation for the Town of Seabreeze is divided into two sections, Parks and Recreation. Let's start there.

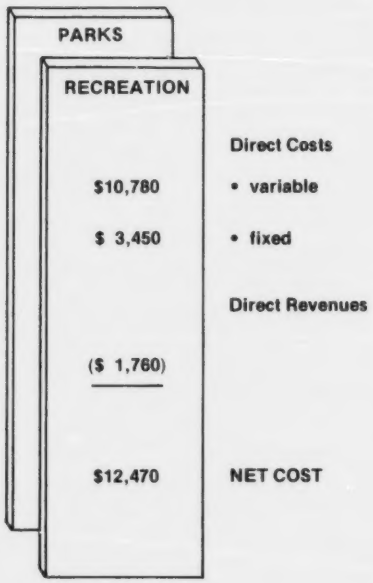
Section Costs

"The Recreation section has direct costs: your salary and your secretary's salary, office space, supplies, and equipment. Those costs are about the same regardless of the programs you run, so they are called **fixed costs.** Whether you do more or less, those costs will stay about the same.

"But you have other costs as well—for example, your costs for part-time clerical staff for registrations, or general advertising costs, like the cost of publishing brochures. Those are **variable costs** because they vary with the level of activity; the more you do, the more it costs.

"You also have direct revenues—the fees paid by the community agencies to advertise in your brochure, for instance. When you subtract them from your direct costs, you get the **net cost** for the section. They are shown in brackets to indicate that they have to be subtracted from the other figures. For the recreation section, it looks like this on a monthly basis:

ALLOCATING COSTS TO SECTIONS



Function Costs

"That $12,470 is the direct cost of running the Recreation section per month," Frank said. "But it has to be passed along to the next level down in the organization chart. It is a direct cost for the Recreation section; but it will be an **indirect cost** to the next level down, the four functions that make up the Recreation Section.

"Look at the organization chart again for a minute, and you'll see that those four functions are Community Development, Aquatic, Recreation Centres and Senior Citizen Centres. The cost of running the Recreation section has to be shared among them."

"Shared how?" Don asked. "How do you decide how much to allocate to each function?"

"There can be any number of ways of determining who will be charged what," Frank replied, "and you have to make that decision on the basis of circumstances in your own operation. For example, the allocation of charges might be made on the basis of the number of participants served by each of those functions. In this case, for simplicity we'll share the allocated costs from the Recreation section equally among them; each of the four functions is charged one quarter of the total, or $3120."

"Sounds simple enough," Don said, "but those functions have other costs as well, don't forget."

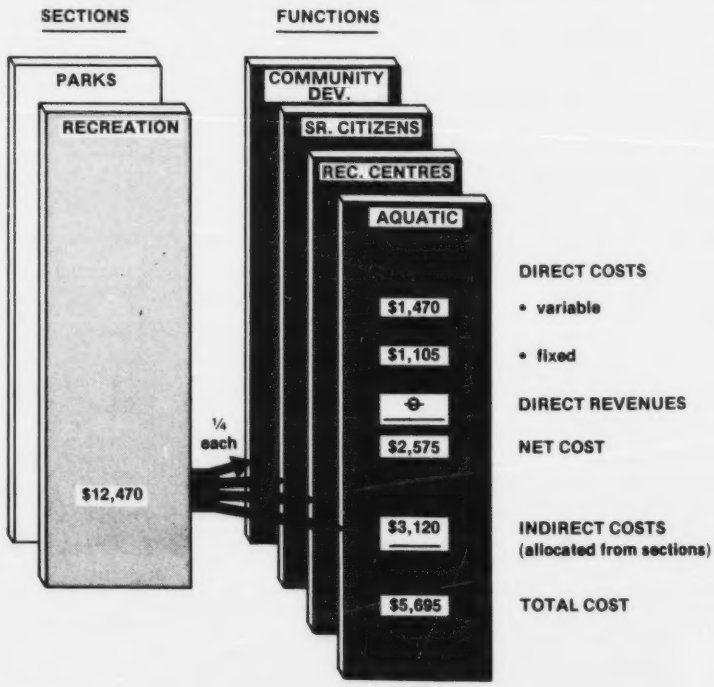
"Right on," Frank said. "Each of them has **direct costs** of their own as well."

"Wait a minute," Don said. "Let me see if I'm getting this right. Those **direct costs** will be made up of the **fixed costs** of running the function—administration, rent, supplies, stuff like that—plus the **variable costs** that arise from the different activities. Is that right?"

"You've got it. In the case of the Aquatic function, for example, there is a part-time secretary who prepares the pool schedule. That salary represents a **fixed cost** of $1,105. In addition, there are three part-time co-ordinators who help organize swimming meets. Those costs vary with the number of meets held each year, so they represent **variable costs** of $1,470. The Aquatic function has no direct revenues, so the **net cost** is $2,575, plus the indirect costs allocated from the section level. The total is $5,695."

And he drew this chart.

ALLOCATING COSTS TO FUNCTIONS



Facility Costs

"I think I'm getting this," Don said. "The next step is the allocate costs at the Facility level, right?"

"Right," said Frank.

"And the **direct costs** from the Functions will become the **indirect costs** for the facilities, right?"

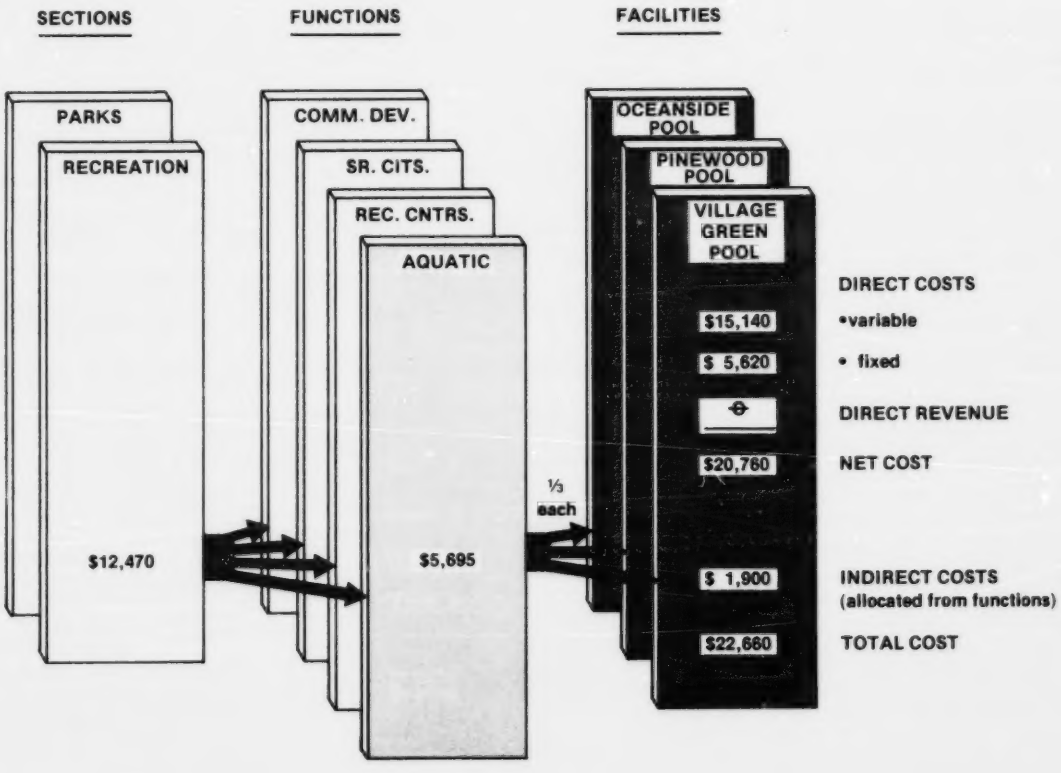
"Right again. The **direct costs** from one level are passed down as **indirect costs** to the level below. We've already done that for the Recreation section, and for the Aquatic function. The next step is to do it for the facilities.

"Take another look at the organization chart on page 11. You can see that the Aquatic function is made up of three facilities, the Oceanside pool, the Pinewood pool, and the Village Green pool. Part of the cost of operating the Aquatic function has to be charged against each of those facilities. Again, the allocation could be made on the basis of some measure of activity—the number of hours each pool is open during the year, for example. But for simplicity, we'll divide the charge evenly among all three. The cost of the Aquatic function is $5,695 per month, and that becomes an **indirect cost** of $1,900 per month to each of the pools. See how it works?

"Sure," said Don. "And each of the pools also has **direct costs.** Let me see if I can work them out. At the Village Green pool, for example, there are **fixed costs**—for heat, light, building maintenance, etc.—of $5,620 per month. There are also **variable costs**—salaries for lifeguards, for example, or chemicals—of $15,140. With the **indirect costs** allocated from the Aquatic function, the total cost per month is $22,660."

And he drew this chart.

ALLOCATING COSTS TO FACILITIES



Program Costs

"I can see how it works," Don said. "You just take the costs from each level of the organization and pass them along to the next level down. But what's the point of doing that? It's a complicated exercise, but what good is it?"

"You just haven't taken it far enough," Frank replied. "When you get down to the program level, you'll see. Let me give you a for instance: you're renting the Village Green pool to the swim club for $40 per hour. Does that cover the whole cost?"

"Sure it does," Don said. "Heck, they supply all their own lifeguards. The only extra cost involved is a little bit of overtime for the janitor to come in early, and that's a lot less than $40 an hour."

"Yeah, but what about the indirect costs?" Frank asked. "Work them out for me."

"Well, let's see," Don said. "We know that the cost of operating the Village Green pool—the real cost that is, including the indirect costs—is $22,660 a month. That's the figure we got when we allocated all the indirect costs to the facilities, isn't it."

"Right," said Frank. "Go on."

"And if you look at the organization chart, you can see we have two programs in operation at the Village Green. We've got swimming classes for everybody from infants to lifeguards, and we've got recreational and rental programs. So I guess we have to start by dividing the cost of the pool between those two programs, the swimming classes and recreational and rental programs, and then allocate part of the cost to the club's rental. Is that right?"

"That's right," Frank said. "First you determine the cost of the **program,** in this case the recreational and rental program, and then you allocate part of that as an indirect cost to the **sub-program.** Just the way we've been doing it all along."

"Okay," Don said. "Here we go.

"The classes take up about two-thirds of the time the pool is in use, so I'm going to charge them with two-thrds of the cost of running the pool. That's an **indirect cost** for the classes, and it comes to $15,100 per month (two-thirds of $22,660).

"The classes also have **direct costs:** there are **fixed costs** of $3,400—mainly for administration, and for maintenance—and there are **variable costs** of $12,570—mainly salaries for instructors. But the classes also collect $8,050 in fees, and that contribution reduces the **net cost** to $7,920. This program's share of the indirect costs of operating the pool is $15,100, so the total cost is $23,020.

"For the rental and recreational program, the **direct costs** consist of $4,120 in variable costs and $2,100 in fixed costs. But the fees charged recreational swimmers total $2,150, so the **net cost** is $4,070. This program's share of the indirect costs is $7,560, so the total is $11,630."

And he drew the chart on page 16.

Sub-Program Costs

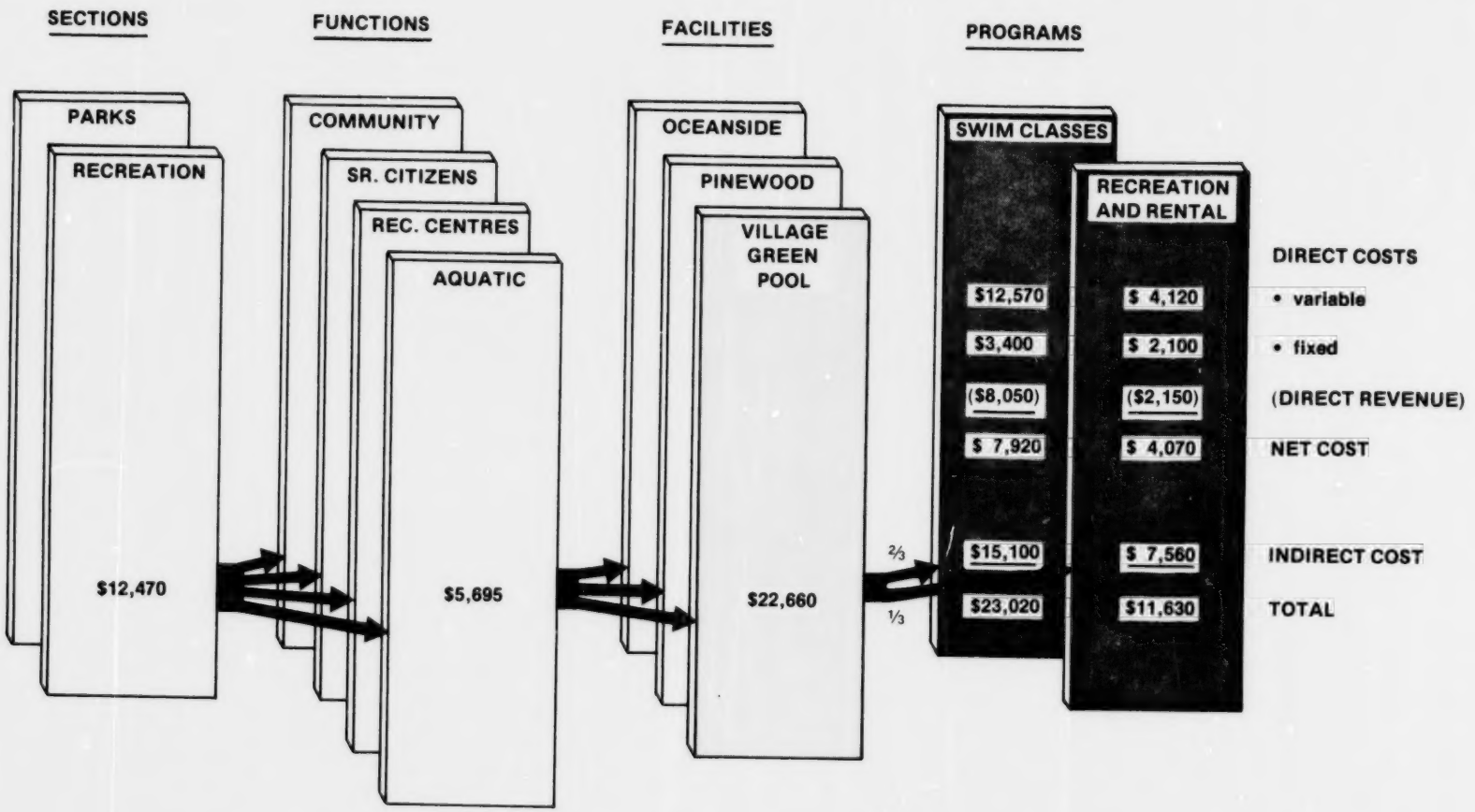
"So far so good," Frank said. "But how do you use those figures to calculate the cost of the swim club rental?"

"The swim club rental is part of the recreational and rental program," Don said, "so part of that $11,630 will be allocated to it. But the swim club only constitutes about a quarter of that program, so the amount charged against the swim club as an **indirect cost** will be $2,910.

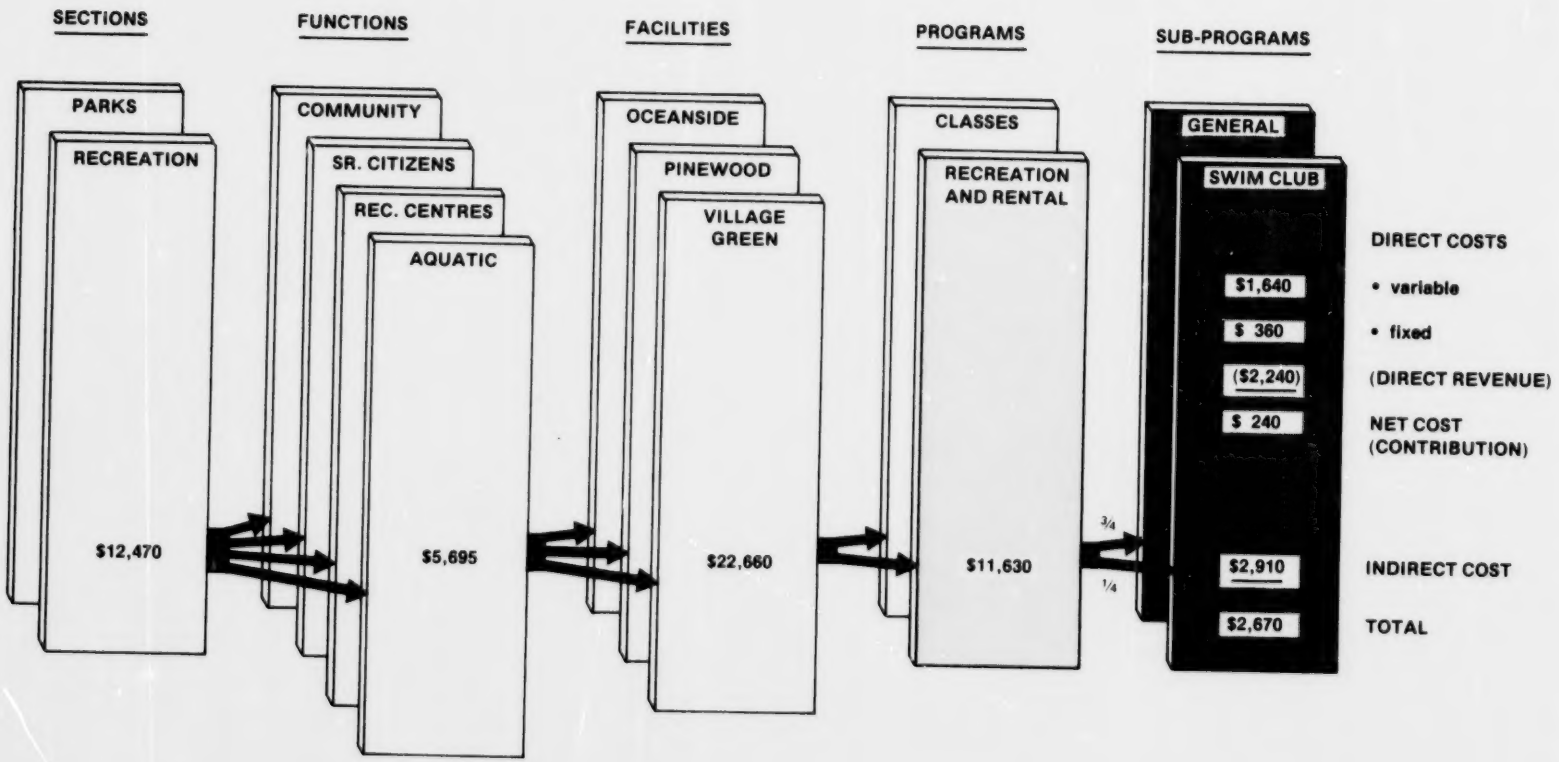
"There are still **direct costs** to consider, of course, but the club is supplying its own lifeguards, so the variable costs are relatively low, $1,640 per month, mainly overtime for the janitor to come in early and open the pool, and extra maintenance. The fixed costs are also low, $360 per month. And the club is paying $2,240 per month for the rental, so the **net cost** is actually a contribution of $240 per month. The indirect costs are $2,910, so the cost of the swim club sub-program is $2,670 a month."

And he drew the chart on page 17.

ALLOCATING COSTS TO PROGRAMS



ALLOCATING COSTS TO SUB-PROGRAMS



Don stopped for a minute and looked puzzled. "Can that be right?" he asked.

"I thought we were making money on the swim club rentals. But the way this works out, it's costing us $2,670 a month."

"That's the whole point," Frank said. "The biggest mistake people make is that they don't figure in all of the costs. If you only calculate the **direct costs** you think you're making a profit on the swim club rental. But all of those **indirect costs** still have to be paid, and when you add them in—when you start using the full cost of running that program—your profit turns into a loss.

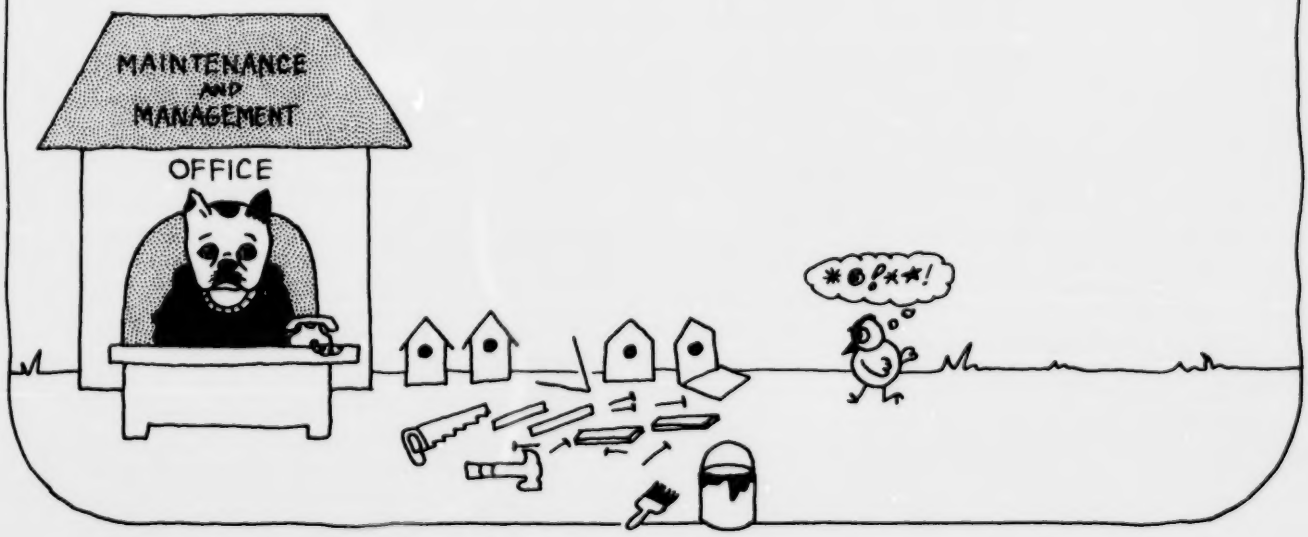
"That's why cost analysis is such a useful technique. Until you know the real cost of your programs, you don't know what to charge for them. You think the fees cover all of your costs and more, but they don't.

"The value of cost analysis in this case is that it gives you the information you need to make informed decisions. You might decide to increase the fees you charge the swim club, for example, and the information you develop through cost analysis will give you the data you need to justify that decision, and tell you how much to charge.

"Or you might decide that swim club program is a good one for the community and should be subsidized from your general tax revenues. But you'll have accurate information to use as the basis for that decision."

The Complete Process of Cost Analysis

SELECTION OF UNIT MEASURES



Frank Forthright didn't hear from Don for a couple of months after that. He heard through the grapevine that Don had made some changes in his accounting procedures, but the grapevine didn't say what the changes were. Frank figured that no news was good news.

"If he needs help, he'll call," Frank said to himself. The thought was scarcely formed when the phone rang.

"Frank, it's Don Rowe calling. I've got a minor problem here, and I wonder if you can help me with it."

"I was just thinking about you," Frank replied. "I was wondering how you're getting along in the wonderful world of cost analysis."

"I'm not sure how wonderful it is," Don replied. "But I'm finding it interesting. It may even be useful. That's what I want to talk to you about."

"Go ahead," said Frank. "It's your dime and your phone call; you can say anything you want."

"It isn't even my problem," Don said. "But that stuff on the real cost of running the pool operations impressed Councillor Scrag so much he asked me to take this on as well.

"Every summer we run a day camp program in Seabreeze, and every year it ends up over budget. This year they went out and got quotes from a couple of private companies, and now they don't know whether to hire them to run the program, or continue to do it themselves."

"So you did a little cost analysis, right?"

"Right," Don said. "I allocated all the indirect costs and worked through the whole procedure, just the way we did it for the pools."

"And what did you come up with?"

"I figure it costs $20 per kid per week for us to run the program," Don said. "One of the private outfits is willing to do it for $15 per kid per week."

"So what's the problem?" Frank asked.

"The problem is that I don't believe it," Don answered. "When I add up how much we'll end up paying for the fees to the private outfit, and the total is about 10 per cent higher than our present cost. I know I'm supposed to allocate all of the indirect costs to that program, but something is wrong. The cost per kid per week is lower with the private contract; but the total cost is higher. It doesn't make sense."

"Sure it does," Frank said. "The difference is that those allocated costs are pretty much fixed. You have to pay them whether you run the program yourself, or contract it out. To make the cost comparison valid, you either have to add those costs to the price of contracting out, or deduct it from the cost of running the program yourself. Do that, and let me know how it works out."

There was a long pause, and Frank could hear Don typing away at the keyboard of his personal computer.

"Well I'll be darned," Don exclaimed finally. "The allocated costs come to about $7 per kid per week. If I add that to the $15 the private contractor wants to charge us the real cost is $22—or 10 per cent more than it costs us now."

"You've got it," Frank said. "Cost analysis strikes again. You can see how useful it is in managing programs. But you've only been getting about half of the benefit of it, because you've been doing it bit by bit, like patchwork. You need to institute a systematic method of analyzing your costs in comparison with your programs. You need to SSCRAUM."

"Scram?" Don asked. "Whadda ya mean, scram?"

"Not scram," Frank said. "SSCRAUM." And he spelled it out. S-S-C-R-A-U-M.

"Okay," Don said. "I know you're busting your conk, waiting for me to ask, so I'll ask: What's SSCRAUM. S-S-C-R-A-U-M," he mimicked.

"Thought you'd never ask," Frank said. "Those are the seven steps involved in setting up a cost analysis system. You can do it on an ad hoc basis, that is as a special procedure when you need it, or you can set it up as a permanent feature of your cost accounting procedures. Either way, the seven steps are the same."

"And you're gonna tell me what they are, aren't you?" Don said.

"Sure I am," Frank replied. "But not today. You come on over here tomorrow, buy me a nice lunch, and I'll show you the path to enlightenment and knowledge. After all, if I just give it to you, you won't appreciate it."

"I should have guessed," Don said. "You don't get something for nothing, do you. There's no free lunch."

"Sometimes there is," Frank said. "My lunch is going to be free."

When they got back to Frank's office after lunch the next day, he settled Don in a comfortable chair, and stood in front of the chalkboard on the wall.

"Now watch carefully," he said, "because I'm only gonna do this once. I hope." And he wrote these letters on the board.

1. **S**
2. **S**
3. **C**
4. **R**
5. **A**
6. **U**
7. **M**

"That's it," he said. "The magic way to health, happiness and a good night's sleep at budget time. If you follow these seven steps, you'll be able to set up

a cost analysis system that will make it easier to manage your department, and which will make it easier to manage better. So listen up now."

"I'm all ears," said Don, and settled back in his chair.

1. SELECT COST CENTRES

"Number one, **S**, stands for **Select the cost centres** you're going to use," Frank began. "You remember when you were setting up the analysis of the expenses for running the three pools, you started by looking at the organization chart and assigned costs to each of the levels in the organization. You were **selecting the cost centres** you were going to use.

"There are just two tricks about this. The first is that you have to choose cost centres that have some relevance to your organization. That's why the organization chart is a logical place to begin.

The second is that it is an awful lot easier to summarize detailed information than it is to break down summaries into detailed information. When you're setting the system up, you have to collect information from the lowest level you think you're going to need. In the analysis we did of pool costs, for example, we had to have cost information from the sub-programs. If we had summarized the costs of the sub-programs, we couldn't have determined the cost of renting the pool to the swim club. You can always build up by summarizing the details, but you can't build down. Got that?"

Don nodded. "Got it."

2. SELECT UNIT MEASURES

"Number two on my little list here is **S**, for **select the unit measures.** We've already been doing this, when we figured out the cost per kid per week for the day camp program. When you're setting up a cost analysis system, you have to decide what the unit measures are going to be—the cost per unit, whether it's the cost per swimmer for the swim meet, or the cost per square foot of floor space to operate the arena, or cost per hour of operation of the swimming pool.

"There are a couple of things to pay attention to here, as well," Frank said.

"Somehow I thought there would be," Don murmured rebelliously.

"The first thing is that you have to give some thought to what the unit measures should be," Frank plowed on, "because that determines what information you will need to collect. The second thing is that the measurements have to be useful—and by useful I mean that they allow you to make comparisons between the cost of operating two pools, for example, or between the cost of running a swim meet as compared with a track meet.

"You may find that you need more than one unit measure for a given program. You may want to calculate the cost per hour of operation of the pool, for example, and also the cost per swimmer. The point is that you have to decide that up front, so you can anticipate what information you're going to need.

"And the best person to select the unit measures is the guy who is directly responsible for that program or cost centre, because he's the guy that has the best understanding of the relationship between the costs and the service. Understand?"

Don nodded. "I understand," he said.

"I'm not so sure you do," Frank replied. "You've got sort of a glazed look in your eye. Here's something to help you remember."

And he gave him this table.

PERFORMANCE UNIT MEASURES FOR COST ANALYSIS

ADMINISTRATIVE FUNCTIONS
- gross and net cost per capita
- ratio of total revenue to total cost
- ratio of administration wages to total wages

FACILITIES
- gross and net cost per hour of operation
- gross and net cost per user
- direct variable cost per user
- gross and net cost per user hour (number of users times hours of use by each user)
- revenue per user
- net profit margin on goods sold (e.g., concessions)
- direct variable cost per hour of operation
- energy cost per hour of operation
- maintenance cost per square metre of floor space

PROGRAMS OR SUB-PROGRAMS
- gross and net cost per acre of park
- development cost per acre of new parkland
- gross and net cost of tree planting per tree
- supervision/maintenance cost per hour of operation
- gross and net cost per participant
- direct variable cost per participant
- user fees as a percentage of gross cost
- ratio of volunteer hours to paid staff hours
- gross and net cost per event

3. COLLECT THE DATA

"Item number three on our list is **C**, which stands for **collection of information,**" Frank continued. "You have to establish some method of collecting the information you need—not just the costs, but the information you need to establish the unit measures. The number of swimmers, or the hours of operation, or the number of acres of grass mown—whatever you decided to use in the step just before this one. Correct?"

"Correct," Don said. "First you decide what information you need, then you set up a system to collect it. Makes sense."

"You'll find, Rowe, as you go through life, that nobody likes a smartass," Frank replied. "Pay attention now. Questions will be asked.

4. RECORD TRANSACTIONS

"Item four, **R**, stands for **record transactions.** You're already doing this now, because you have to record invoices, and vouchers and journal entries now. The difference is that you may have to establish a different coding system to keep track of the non-financial information—the number of users, the hours of operation, the number of acres of lawn—you need to have for the unit measures.

5. ALLOCATE COSTS

"Item number five is **A** for **allocate revenues and costs.** I'm not going to go through this again, because we've just done that whole exercise with the pools, and you know how to allocate costs, don't you. You don't? Go back and look it over.

6. UNIT MEASURES

"Item number six is **U** for **calculate the Unit measures.** Simplest thing in the world. Divide the cost—the real cost, remember, after you've allocated all of the indirect costs—by whatever unit measure you've chosen. If it costs $400 a week to run the day camp program, and there are 20 kids in the program, the **unit cost** is $400 divided by 20 kids, or $20 per kid.

7. MONITOR AND MANAGE

"Item number seven, the last, is **M** for **monitor** the information you get from all this, and use it to **manage** your programs. What you've developed is a method that allows you to keep track of costs more effectively, and to measure the efficiency of different operations. What you are developing is a sophisticated management information system that can help you and your political masters make informed decisions about different policies and programs. If you go to all that trouble and don't use it, you're some kind of a sap. Just remember SSCRAUM."

And he wrote it out again, like this.

1. **S**elect the cost centres.
2. **S**elect the unit measures.
3. **C**ollect the information.
4. **R**ecord transactions.
5. **A**llocate revenues and costs.
6. **U**nit cost calculation.
7. **M**onitor the system and **M**anage the programs.

"Any questions?" he asked.

"None I want to bring up right now," Don said. "I can understand how the thing should operate, and I think I can see where the information you generate could be useful, but it sounds like a lot of work."

"It's less work than you think," Frank replied, "because you're doing most of those things now. It's mainly a question of reorganizing information you already have, to make it more useful. All you have to do is SSCRAUM.

"All I have to do is scram," Don said.

"Terrific," Frank said. "Here I am sharing my priceless knowledge with you, and all you can think about is getting away. Go ahead. Walk away. But promise me one thing: just read the next section of this manual."

"I don't know about that," Don said. "It looks kind of complicated." He flicked through the pages idlely. "All this stuff about reserve funds and special allocations. I'm not sure I'm ready for this."

"Sure you are," Frank replied. "There's nothing in there you haven't already learned. It is all the same ideas, the same concepts, but it's expressed in more technical language.

"Don't be afraid of it. You already know everything you need to understand and use the cost analysis system."

And so do you.

Technical Material

INTRODUCTION

USES OF COST ANALYSIS

WHEN NOT TO USE COST ANALYSIS

DEFINITION OF COSTING TERMS

ALLOCATION CONCEPTS AND EXAMPLES

SPECIAL CONSIDERATIONS

Introduction

Cost analysis is not an end in itself. Its purpose is to provide information in a useful fashion, so that proper, well-informed management decisions can be made. This information can be used for one-time, *ad hoc* decisions, or as part of an on-going system to monitor costs over time, or in comparison to other, similar activities.

One of the continuing challenges facing recreation organizations is the need to reduce costs and increase revenues, while still meeting the recreation needs of the community. Juggling these objectives is part of the business of managing recreation programs, and in order to juggle successfully managers require precise and detailed information.

Cost analysis fits into the basic management process. It begins with the day-to-day operations: a system is set up to track costs. The costing information then helps the manager monitor results and compare actual to budgeted costs. This information in turn is helpful in developing more accurate budgets for the future, and for assessing long-term strategic plans for the recreation department.

In essence, cost analysis provides a better understanding of an agency's operations. It allows managers to discuss funding and servicing problems in a positive way, rather than having to defend generalized cost estimates of the services they are planning to provide.

Cost analysis is only an intitial step in measuring an agency's performance. But even if no further steps are taken it provides important and useful information for agency administration and management. In its simplest form, cost analysis will:

- allow comparisons within and between recreation facilities and programs;
- provide some ranking criteria for specific programs and services;
- provide targets and guidelines for making management decisions and for allocating resources;
- allow continual evaluation of agency objectives;
- provide data to justify budget increases or other changes;
- identify low-cost programs and services;
- highlight the ratio of direct variable and fixed costs to indirect allocated administrative and maintenance costs; and
- provide data for establishing and revising policy.

Cost analysis is an historic summary of costs. It provides records of past transactions that can be used to evaluate past performance, and to revise future services or programs. It is a very powerful tool —if it is used properly—but it does not provide a magic answer for all management problems. It is very useful in some areas; but it must be used with caution in others.

Uses of Cost Analysis

A) TO MAKE NON-ROUTINE DECISIONS

These kinds of decisions typically involve *ad hoc* studies, or queries which are not part of the routine management process. They include the following:

- **Determination of User Fees**

Increasingly, agencies must resort to charging user fees for services provided. By knowing the cost of a service or program the manager can calculate the necessary fees and charges. Accurate and detailed costs will also aid the determination of the fee policy, which may be to recover only the variable and fixed costs; or to recover full costs for adults but operating costs for senior citizens and children. Since the user-rate policies may vary, the cost analysis system should be structured to provide various levels or complexities of costs.

- **General Agency and Policy Support**

This is the other side of the user-fee calculation. Policy decisions made by councils or boards may determine the subsidy level for each service with the balance of costs recovered by fees and charges. Detailed cost analysis is required so that public

officials can justify to the constituents the tax subsidy levels and the level of service to be anticipated as a result of the subsidy.

- **Setting of Standards**

Unit costs establish a "norm" for the cost of a product or service and allow for comparisons. The performance of those responsible for a service can be monitored against the norm which, in turn, can be compared to the cost of other programs or services, or the cost of a similar program provided by another agency or by the private sector. The latter comparisons of course, must be done carefully to ensure that similar allocation techniques are used. (See Section 4.3)

- **Feasibility Studies**

Questions arise regularly within departments regarding what is commonly called the "make-buy" decision. Should the department provide the service internally or is it cheaper to contract it? Municipalities face this query for garbage collection, police services and transit systems. For parks and recreation departments, the "hard" services such as running day camps and concessions, maintaining park areas, using marketing agencies and providing fitness classes can be reviewed to determine the cost of contracting-out or keeping in-house.

Costing systems will also allow better estimation of operating, allocated and capital costs when preparing feasibility studies for new facilities or programs, before they are committed. Access to costing records of similar municipalities will be valuable in understanding the operating-cost implications of a new arena, swimming pool or community center.

B) IN ROUTINE PLANNING AND CONTROL SYSTEMS

When cost analysis is used as part of an ongoing management program, it is best used in planning and program selection; cost control; and efficiency evaluations.

- **Planning and Program Selection**

During the planning process, unit cost data allows management to select programs and services that most closely meet the program's goals and objectives and yet remain within the economic restrictions.

The level of service can also be economical, as the cost of increasing levels of service can be determined using unit costs. For example, the cost of cutting grass three times or four times a month in the summer can be determined if the costing system provides historic data on such factors as the cost-per-square-metre-cut. Data may show that modest increases in the service level may result in considerable operating cost increases. Conversely, it may become apparent that more regular cutting in another area has reduced the cost of this service.

- **Cost Control**

Monitoring actual versus budgeted costs will highlight variances and the areas where action is required. The following is a simple example of cost variance for a tree-planting program.

Budget 100 trees at $30/tree = $3,000
Actual 100 trees at $38/tree = $3,800
Variance - Unfavourable = $800

The cost-analysis system would, most likely, also tell the user that the reason the tree-planting program was over budget was that labour took longer than planned and the purchase-cost of trees was higher than expected. The efficiency of labour may be queried in this case and the purchasing department may be requested to look elsewhere in the future.

Cost control also involves reviewing the types of costs within a program; for example, if the unit costs of a fitness program in one municipality are much higher than those in another. A review of the detail of the costs might show that one program had volunteer leaders and was charged a low rental for the facility. By reviewing the types of costs rather than simply total costs, management may decide to change the method of delivering a service or may at least be able to rationalize an abnormal cost.

- **Efficiency Evaluations**

Comparison of unit cost data over time helps determine the ongoing efficiency of a program or facility. For example, if the unit cost of day camps—per participant—increases from $55 per user week to $65 per user week, management should know why this cost increase occurred before it is passed on in higher fees. Inflation, higher salaries or benefits, or increased level of service could all be factors. Answers are needed to determine if the programs are being administered efficiently.

C) COST COMPARISONS

Costs can be compared to a variety of cost data to provide management with better information to make decisions and take action.

Within a municipality or agency, costs can be compared to budget, historical costs, long-term forecast costs, unit costs at different levels of service of a program, and unit costs of two separate programs/facilities.

Programs and services can also be compared on a total cost- or unit cost basis, to third party agencies such as other similar agencies, the competing private sector, and/or, proposals by contractors.

Comparisons will highlight areas that are different and will also provide valuable indicators of the acceptable cost range for operations. However, these comparisons should not look at cost data in isolation but should also take account of potential variables, such as innovations in other municipalities, controlled factors such as quantity of service, use of volunteers, publicity, user fee rates, and uncontrollable factors such as weather conditions, external funding, debt burden and private sector facilities.

D) SPECIAL CIRCUMSTANCES

From time to time, special situations arise where it may be impossible to develop historical cost data. An ad hoc study is then carried out to determine the costs. For example, if a job is carried out for a third party who will be invoiced for the cost—and this activity will not recur regularly—the process to establish a billing is as follows:

- Record the actual time involved for all staff involved on the job.
- Record direct materials and supplies used.
- Determine an hourly rate, which includes fringe benefits for the entire department staff.
- Decide on a factor for charging central support services outside of the parks and recreation department.
- Determine user rates for vehicles and other equipment or facilities.
- Calculate the cost of the job by applying these factors according to a reasonable allocation basis—one you are prepared to discuss with the third party if necessary.

Table 1 shows the process for determining the cost of organizing and running a soccer program for a third party organization. In effect, the set-up and calculations for this special analysis—breakdown in costs and the pro-rating, or allocating procedures—are very similar to those required to set up a cost-analysis system initially. Once this process is established, making these one-time decisions is much easier.

TABLE 1

SOCCER PROGRAM - ESTIMATED COSTS

Participants - 330
Games to be played - 90
Soccer fields available - 4

Direct Costs	Total	Cost Per Participant
Variable Costs		
Referees and games officials (Calculated at **$15** per hour and 2 hours per game)	$5,400	$16.30
8 games balls at $25 each	200	.60
Marking the fields with lines (Calculated at $50 per field)	200	.60
Fixed Costs		
Use of goals, nets and corner markers (Calculated at 10% of cost)	50	.20
	5,850	17.70
Indirect Costs		
Staff - Sports supervisor's time (pro-rated)	500	1.50
Maintenance staff (calculated at 4 fields x $15 per hour)	360	1.10
Office support - Registration, administration and postage and telephone (pro-rated at one-half day's cost of total office cost - .05 x $48,000	120	.40
Field maintenance costs - preparation and upkeep of 4 soccer fields throughout the year. Includes fertilizer costs, equipment, operating costs, and maintenance central pool costs - $60,000 pro-rated to 4 soccer fields (10%) - $6,000 for the year. Program to be charged with twelve week's use out of a 26 week season equals 46%	2,760	8.40
	3,740	11.30
Total Costs	$9,590	$29.00

When not to use Cost Analysis

Producing costing information may be expensive, to the extent that it requires more staff and higher administrative costs. These costs should be examined carefully when the decision to implement a cost analysis system is made. In addition, cost analysis may produce some misleading information, and it should be used to complement other management tools. You should be especially careful in the following areas:

- **Distinct Cost Centres**

The system works best if there are clear, distinct cost centres, each with its own distinct objectives for the progression of a service or a program. With such clear cost centres direct costs are easier to determine, and the basis of allocation is generally more easily understood. Initially a detailed, elaborate system costing all minor programs should not be set up, since it may create confusion, rather than provide results. Management should ensure that worthwhile decisions can be made with the final level of detail available in the data collected.

- **Cost Comparisons**

Although comparisons can be revealing, highlighting differences and inefficiencies, managers should be careful that apples are being compared to apples—and not apples to oranges. For example, facility maintenance costs will vary considerably depending on a facility's age, size, location and program usage.

The fact that municipalities and other agencies may use different accounting methods should also be taken into account. Some agencies will create reserve funds; others will charge internally for services between different departments; and still others will maintain capital expenses in their costs. These will result in a distortion of results in comparative evaluations.

The reliability and validity of comparative data should be questioned before coming to final conclusions. A similar data base should be used; allocation methods should be consistent and unit cost measures similar. If such similarity is impossible, decision-makers should at least recognize and understand the implications of the different concepts.

- **Wide Range of Methods of Service Delivery**

Similar programs or services may be provided using different methods. For example, some services may be contracted out or carried out by volunteers or part-time staff. Again caution is required, if strict cost comparisons are to be made.

Administrative cost allocations may be different if the service/mix of agencies varies. A department providing a wide range of products will likely require more specialist and central staff than organizations providing a limited range of services.

Most of these areas for caution are for comparisons to external organizations. However, they should not restrict comparison, which is an excellent means of reviewing another agency's methods of delivering similar services.

Definition of Costing Terms

Before the detailed components of a cost-analysis system can be implemented, several costing definitions must be understood. Most of these are general terms used in any cost-analysis system but some are adapted specifically for the recreation setting.

A cost centre is the organizational unit to which costs and/or revenues are recorded. These units may also be referred to as responsibility centres, as there should be one individual responsible for the activity and results of that unit. In this manual the term cost centre will also represent responsibility units which are summaries of various subordinate cost centres. For example, one cost centre (the Aquatic function), may be allocated by type of activity into other cost centres such as public swimming, infant classes, adult classes, swim clubs and so on. Each of those activities will be a cost centre as will the combined summary of all the activities.

Generally the hierarchy of cost centres will look somewhat like the organization chart used earlier.

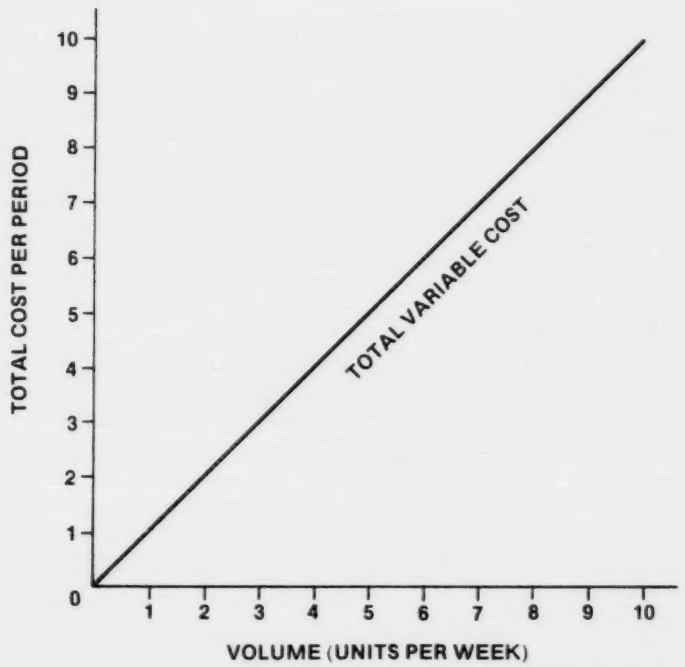
The names of these levels may vary among organizations. For our purposes, the levels consist of:

- **Sections** - The most senior level in a recreation organization, generally comprising the responsibility centres of senior management officials.
- **Functions** - The general services provided by a section to achieve its objectives. In a recreation department, functions would include such general services as aquatics or recreation centres as a group.
- **Facilities** - The physical structures employed to offer services or programs to the community. In the case of the aquatics function, facilities would consist of the individual swimming pools. Depending on the organization's type and size, there may be no difference between functions and facilities.
- **Programs** - The activities provided by or conducted in a facility. For example, the swimming pool could have programs in instruction as well as recreation programs.
- **Sub-programs** - The detailed components of programs. The use of this category depends on the degree of detail required for effective cost analysis. For the pool, the swim club could be one of several sub-programs.

For costing purposes it is important to realize that there are different types of costs which act in different ways and can be controlled differently. *Cost analysis involves charging to each cost centre the costs or share of costs that logically and practically can be associated with the service provided by the cost centre.*

VARIABLE COSTS

- **increases directly with activity level**
- **average unit cost remains same**



Classification of the major types of costs and revenues will make the process of distributing costs more clear, and illustrate the relationships of costs with outputs indicating various forms of cost behaviour.

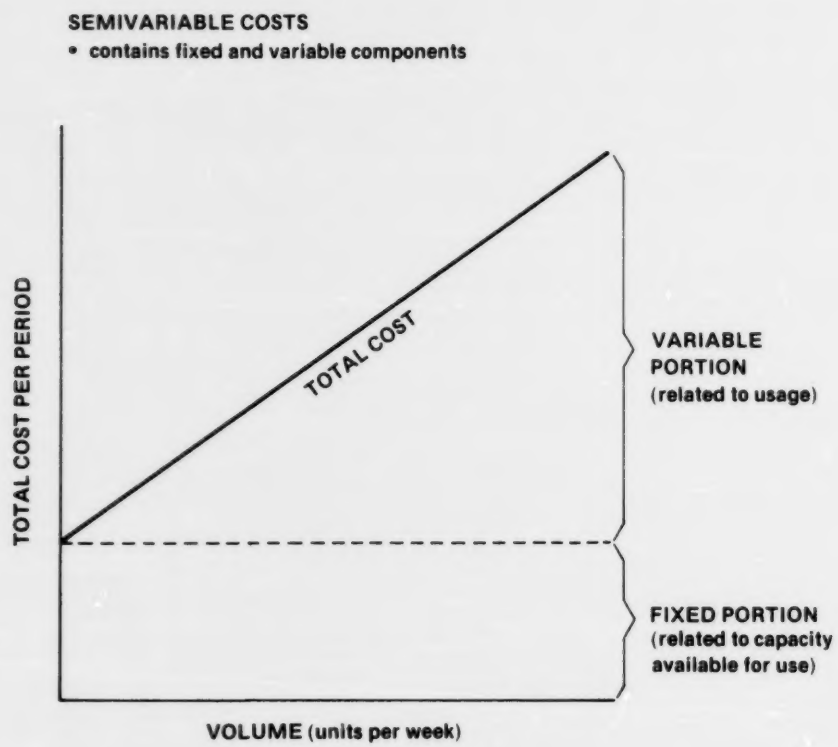
Direct costs - the costs of providing a service or program which can be directly identified with one specific cost centre. All costs are direct costs related to some cost centre in the organization; however, the level of the cost centre may vary. For example, while a lifeguard's wage is a direct cost of the swim club sub-program cost centre, Don Rowe's salary is a direct cost of the recreation department section cost.

Variable costs - these are direct costs that change in proportion to changes in activities. For example, chemicals in the pool are directly related to the hours of operation of the pool. Within most programs, supplies and materials will vary directly with the number of participants. The cost of hourly or temporary wage earners also falls under this category.

Other costs are sometimes defined as semi-variable in that they vary in steps. For example, one instructor may be able to handle up to ten participants before a further instructor is necessary. For purposes of this guide, semi-variable costs should be treated as variable so that the variable cost category will include all costs that are volume-sensitive over the budget or the seasonal operating period.

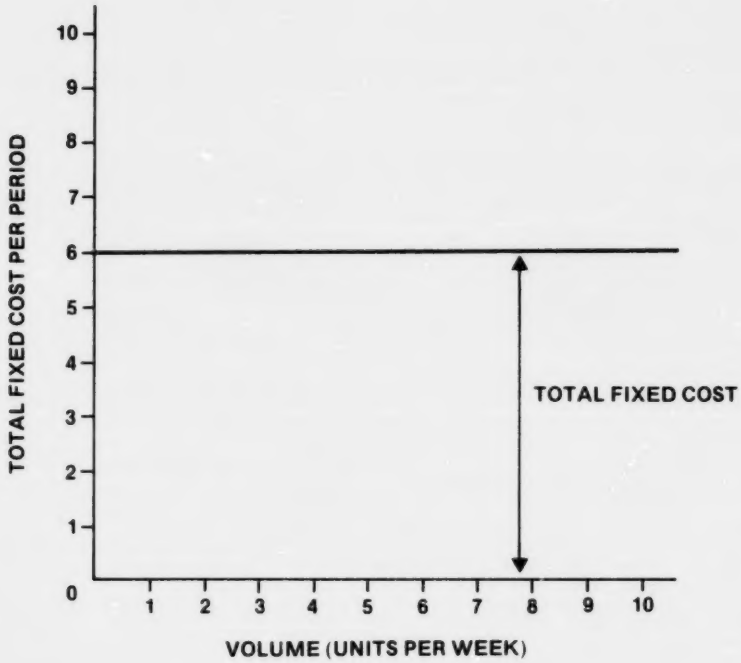
Fixed costs are another major category of direct costs and include costs that do not appreciably vary with activity changes during the reporting time-period. For example, this category includes salary costs for permanent staff positions (e.g. Don Rowe's salary). In fact, all fixed costs are variable over a number of

COST BEHAVIOUR



FIXED COSTS

- costs do not change as a result of small changes in volume
- average unit cost falls as volume increases within capacity limits



years as lease or contractual arrangements are altered. Fixed costs also generally include overhead items such as utilities, insurance, building maintenance and repairs.

Direct revenues are fees and other income specifically related to a cost centre activity. These most commonly include user charges at the program or sub-program levels and may include recreation grants or say, United Way grants at the senior-level cost centre.

Indirect costs (which are allocated) are costs that have been spread (pro-rated) on an agreed basis, from one cost centre to another. Often these are centralized costs of a service department or a higher level cost centre. Examples are facility operating and upkeep costs which have been recorded initially as direct costs at the facility level. These would then be allocated to more detailed cost centres based on a factor such as the amount of space used by each cost centre; retainers and legal costs which could be allocated based on time estimates of service provided to individual cost centres; general materials and supplies, such as stationery allocated by the ratio of recreation staff to total staff in the building and so on.

Fixed and variable costs are controllable to a considerable extent by the individual responsible for the cost centre and are assigned to that manager directly so that he can be held accountable. Indirect costs are not as easily controlled but are collected at a higher level (section or function) within the costing system and then allocated to user cost centres to obtain a full cost of the programs or services offered at more detailed program or sub-program levels.

Other costing terms that are relevant and which will often be referred to in cost manuals include:

operating costs - variable and fixed costs directly identifiable with a specific cost centre.

contribution - in the private sector, this would be called profit-the amount by which direct revenues exceed operating costs. In the example used earlier, the contribution is the difference between the added costs of operating the pool two extra hours per day versus the revenue of $40.00 per hour.

net costs - the result of all costs less all revenues. This is usually equivalent to the "subsidy" from general revenues of the organization which is required to support a program or facility.

marginal cost - the extra fixed and variable costs required to produce one additional unit of activity over and above the level of activity currently provided. Generally, this is less than the net cost since certain fixed costs will not grow as service expands.

break-even level - the point of activity and revenue generation at which costs are equal to revenues.

Allocation Concepts and Examples

A major and vital task in operating the cost-analysis system is to select and maintain the appropriate allocation concepts to pro-rate indirect costs to the relevant cost centre level. Without a meaningful allocation, any cost centre could either be charged allocations which are not relevant or vice versa. If such errors occur and are significant, users will quickly come to disregard the costing system, and its results will be useless.

There are a great variety of allocation methods which can legitimately be used, but some general principles should be considered first:

- **Keep the allocation concepts simple.** The basis of allocation should be easily understood and agreed upon by all concerned and the data required for allocation should be easily collected. For example, an allocation of electricity costs of the swimming pool should be based on an easily measured factor such as hours of operation, rather than kilowatt hours used by each group using the pool.

- **Do not aim to cost exactly.** Percentages and formulae should not be computed beyond more than one decimal point. A general estimate based on historical trends and experience is just as adequate in most cases as the results of a major time-and-motion study. For example, allocating a lifeguard's wages using hourly units is usually sufficient rather than costing each five minute segment of his time.

- **Consider what the use of the costing information will be before determining the level of detail required.** For example, will the management decision be different in deciding the user fee, if unit cost is shown as $60.00 or $60.0136?

- **Consider the size of the costs to be allocated.** It is more important to ensure correct allocation of energy costs of $300,000 per year, than to be concerned with paper costs at $2,000 per year.

- **Predetermine the allocation concepts during the planning and budget process, and maintain them consistently unless there is a major change of facts.** It becomes extremely confusing when the ground rules are changed during the year. For example, if it is agreed that electricity will be allocated based on pool operating hours, that should remain the basis for that year at least.

- **Allocation is only justified to get a more complete cost on which management decisions will be made.** If allocation will not assist that process, it should not be attempted and managers may be wise to do the direct cost analysis only.

- **Allocation decisions are best made by the person responsible for the cost that is to be allocated.** This individual will know the basis of measurement of the service. To a large extent, experience and subjective judgement will influence the decision on the appropriate allocation concept.

Some Examples

Earlier it was established that senior level costs should be allocated to lower level cost centres. The simplest method of achieving this would be to allocate total costs of a cost centre on only one basis (e.g. total pool costs based on hours of operation). While this is a simple method, it may not be accurate. Instead, different costs should be allocated on differ-

ent bases. In our example, the swim club supplied a lifeguard, so the Town's lifeguard salary costs should not be allocated to the swim club cost centre.

The following are some typical allocation concepts that could be considered to allocate expenditure groupings to program and sub-program cost centres. Although these examples are provided to illustrate the concepts, individual organizations should determine their own allocation concepts based on the principles noted above.

- **Salaries and Wages**

These costs represent 50 to 60 percent of all costs in a typical parks and recreation department and thus will form the most significant component of any cost allocation exercise. Consider the following:

It is usually possible to charge most salaries and wages directly to a cost centre. The director's salary is charged to an administration cost centre while an arena attendant is charged to a facility or program cost centre.

Time-sheets may be required for detail. For example, they are frequently used for maintenance crews because a parks maintenance crew may work at several different locations during the course of a week.

For administrative staff, facilitator/coordinators and other personnel in service functions, an annual estimate based on the percentage of time to be spent on activities and programs—based on budget plans —is usually acceptable. Although this provides a general costing, it is usually sufficient for the purposes of a costing system. The allocation should reflect the role provided. For example, the department head may be allocated to all cost centres while the assistant parks head would be allocated only to parks cost centres.

Payroll benefits (UIC, CPP, etc.) are best calculated as a percentage of direct salary costs and allocated in the same manner as the related salaries.

- **Vehicle and Machine Costs**

Virtually all vehicles and machines should have odometer or hour-meter readings taken regularly. These readings then form the basis for allocating the vehicle cost to a cost centre, using standard charge-out rates. In effect, the vehicles will be handled in the same manner as payroll for employees and the same concepts apply.

- **Materials and Supplies**

Most materials will be directly charged to either facility or detailed cost centres and will not be allocated further. For example, swimming pool chemicals will be charged to the facility while day camp supplies will be charged to the applicable sub-program.

The allocation of costs from facilities to programs is based on a percentage of total hours of operation of each program.

- **Office Operating Cost**

Office operating costs include a broad range of support services costs required to operate a recreation agency, but are not directly assignable to a specific program. They are also referred to as administrative or central services costs.

As with administrative salaries, an allocation concept in percentage terms should be developed annually and likely not changed until the following year. The allocation could be based on square metres of space used by each program or hours of operation of a program.

- **Facility Operating Costs**

Costs are initially collected at various levels of activity in the cost centre hierarchy. At the level of a facility, a cost may be a direct cost (variable or fixed) but at a program level, the same cost becomes indirect as it has been allocated along with other facility costs. Utilities are an example. They represent a variable cost for the whole facility and are then allocated to the individual programs.

Depending on the magnitude of the cost, it may either be allocated by itself or, more likely be assigned as part of a pool of costs allocated to the programs as a facility operating charge.

Cost can be allocated based on the hours which the facility is available or on the hours of use of the facility. Either method is appropriate and will usually result in similar costs. However, a method should be selected and used consistently.

- **Exploratory Costs**

Time, effort and therefore costs are incurred in the exploration of programs or services that never come to be, or that are started in a future cost period. These costs remain as a cost of operation and should be charged out within the administrative overhead allocation since exploratory costs are a cost of operating the agency to maintain the appropriate level of service.

Special Considerations

While costing data should quantify and capture all costs that are associated with providing programs and services, there are special problem areas that arise in the process.

- **Costing for Capital Assets**

The private sector keeps detailed records of the cost and useful life of fixed assets. This capital cost is depreciated, using agreed, generally accepted accounting policies of allocation, over their expected useful life span, and is charged against revenues annually. Depreciation can be viewed as a lease or rental charge for the use of those assets, except that there is no interest component of the charge.

The public sector does not keep records of capital assets and their depreciation and there is no expense established to play the role of depreciation. Fire insurance values could be used instead to estimate capital values; however, depreciation rules and allocation rules would have to be established. The argument also exists that capital costs are "sunk costs"—they have been expensed and the asset is available, so any added charge would be a duplication of the cost.

To determine the appropriate treatment of capital cost depreciation, the analyst should consider that:

- capital costs are a major cost of providing most services;
- capital costs are sunk costs which cannot be altered unless cost analysis is for a feasibility study;
- when setting user rates, capital costs are a cost of service;
- Depreciation is not part of a normal public sector accounting system so the cost system would not balance the financial accounting system;
- for intra-organization comparisons, capital costs may be meaningless due to unique financing or construction arrangements.

In cases of ad hoc feasibility studies, a capital cost factor may be introduced, especially if comparing two or more alternatives which require a major capital investment. Feasibility studies are an added use of cost analysis so the capital cost considerations should only supplement cost data when appropriate.

- **Reserve Funds**

In recent years, many municipalities and other recreation organizations have been establishing reserve funds for future capital construction or replacement of existing facilities. This is a financial management tool and planning mechanism that allows an organization to set aside monies for major repairs and/or replacement of facilities and equipment. These reserve funds are for a defined predetermined purpose and stabilize the general revenue requirements by planning for the expected and unexpected.

While this may be a valuable financial management tool, it is a relatively arbitrary cost analysis concept. If reserves are to be established, they may be entered in the cost analysis system in order that user rates reflect the cost of the reserves.

- **Debt Principal and Interest**

Actual expenditures are involved in the payment of debt principal and interest so this cost should be allocated to departments, to the extent possible.

If a municipality has issued general municipal debt, it may form part of the allocated central administrative costs. If the debt raised is for a specific facility that is easily traceable, such interest costs may be identified directly to the facility costs. Where a municipality issues debt for a facility such as an arena, it is quite possible that the debt repayment which is expensed will be very close to the depreciation charge that would be levied in a private sector company. *The treatment of interest and debt charges, however, should be the same as the cost of capital assets.*

- **Use of Volunteers**

The work performed by volunteers should not be costed within the costing system. This is inconsistent with the philosophy that a costing system should report only actual expenditures and should be consistent with principles used for general financial accounting purposes. Any direct out-of-pocket costs involved with training volunteers or operating costs will be assigned to the activity involved but no value will be assigned to time spent by volunteers. However, the ratio of volunteer hours to paid staff hours can be quite useful in comparing various facilities or programs.

- **Reciprocal Use of Facilities**

Many municipal departments provide services for

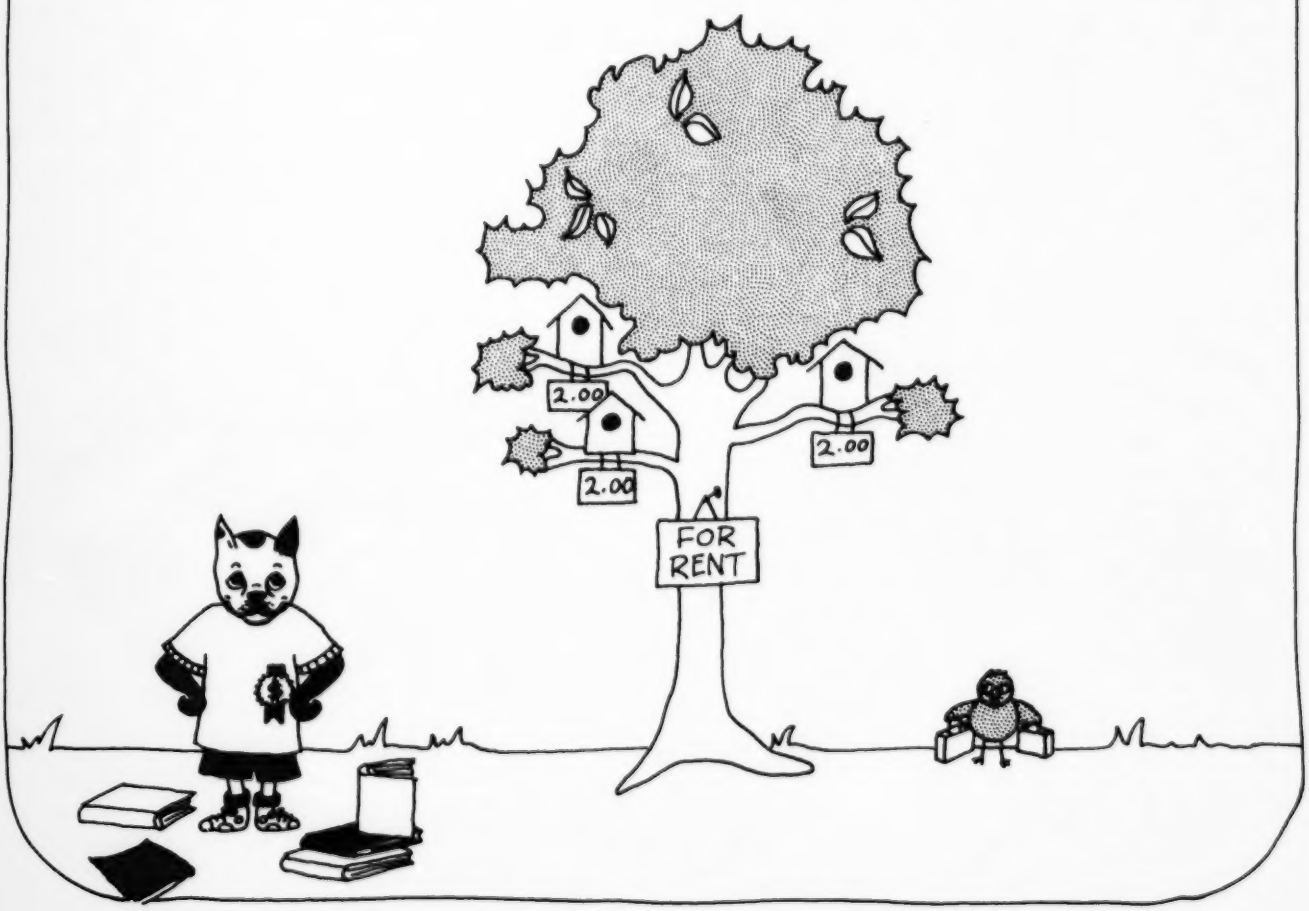
each other. Also, a public sector organization may barter its services for those of a private sector company. Often these services are not charged out in the general accounting system. (For example, Parks may maintain the grass at the Town Hall, or Public Works may provide repairs to the baseball diamond or school facilities used by municipalities.) Theoretically, these services should be included as costs—if they represented payments to contractors, they would be costs. At the same time, this procedure would add a level of complexity which could not be handled by most recreation accounting systems.

As a general principle, unless the costs are real dollar costs entering the official accounting records, the costing system should not report charges for these services. If the service is significant enough that an interdepartmental charge or journal entry adjustment is made, then such charges should be reflected in the costing system. Since the concept of interdepartmental charges is becoming more common, the inclusion of such charges in cost analysis may arise more often that it has in the past.

Notes

Further Reading

The intent of the committee, as mentioned in the introduction, was to provide a manual that would be easy to use and flexible. Some readers may be satisfied with the scope and level of detail contained in the guide. Others may have certain projects which require more information on cost analysis. The committee has prepared a list for further reading, therefore providing the reader with the option of studying the subject further. To meet the needs of other clients, the Ontario Recreation Society has available workshops on cost analysis.



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